

Notice of Allowability

Application No.

09/871,368

Examiner

Michael N. Opsasnick

Applicant(s)

MURASHIMA, ATSUSHI

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to supplemental amendment filed 4/27/06.
2. ☒ The allowed claim(s) is/are 6-26.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Michael N. Opsasnick

Patent Examiner

DETAILED ACTION

Allowable Subject Matter

1. Claims 6-26 are allowable over the prior art of record.
2. The following is an examiner's statement of reasons for allowance:

As per independent claims 6,7,12,17,22, the recited limitations pertaining to the calculation of voicing parameters to determining voiced/unvoiced audio input is not explicitly taught by the prior art of record. Furthermore, it would not have been obvious to one of ordinary skill in the art of speech feature extraction and comparison to modify the teachings of the prior art of record to obtain the recited limitations of the independent claims as noted above.

With respect to the prior art of record, Takada (6088670) teaches a voice detector for frames of speech (col. 2 lines 45-50) using a zero measure to determine voiced/unvoiced segments (col. 5 lines 10-22) while performing long term averaging (col. 5 lines 23-31). DeJaco (5911128) teaches voiced/unvoiced/noise discrimination (col. 5 lines 15-24) measuring the parameters using five distinct calculations (col. 5 lines 40-54), of which one, the energy differential calculation comparing the energy of the current frame against an average frame (long time) energy, and calculating the differential between the two (col. 9 line 24 – lines 48). DeJaco (5911128) calculations are different than the claim scope of the independent claims performing a calculation using line spectral frequency, whole band energy, low band energy, and a zero crossing number to perform the voicing/unvoicing decision (see Fig. 2 of the instant invention

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voicing/unvoicing circuit – subblock 1040). Furthermore, the other prior art of record fails to teach such calculating circuit as claimed (and demonstrated in Fig. 2 of the instant invention).

Claims 8-11,13-16,18-21,23-26 are allowable over the prior art of record because these claims depend from independent claims that have been determined to be allowable over the prior art of record.

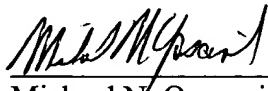
Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled “Comments on Statement of Reasons for Allowance.”

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Opsasnick, telephone number (571)272-7623, who is available Tuesday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Richemond Dorvil, can be reached at (571)272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

mno
5/24/2006


Michael N. Opsasnick
Examiner
Art Unit 2626